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Digitalisation of Consumption and Digital Humanities - Development Trajectories and Challenges for the Future

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Abstract. Digitalisation transforms practically all areas of the modern life: everything that can, will be digitalised. Especially the everyday routines and consumption practices are under continual change. New digital products and services are introduced at an accelerating pace. Purpose of this article is two-fold: the first aim is to explore the influence of digitalisation on consumption, and secondly, to canvas reasons for these digitalisation-driven transformations and possible future progressions. The transformations are explored through recent consumer studies and the future development is based on interpretations about digitalisation. Our article recounts that digitalisation of consumption have resulted in new forms of e-commerce, changing consumer roles and the digital virtual consumption. Reasons for these changes and expected near future progressions are based on assumptions drawn from data-driven, platform-based and disruption-generated visions. Challenges of combining consumption and the digital humanities approach are discussed in the conclusion Section of the article.

Keywords: digitalisation, consumption, consumer behaviour, data economy, digital virtual consumption

1 Introduction

1.1 Purpose of the article

Digitalisation, defined as the steadily increasing utilisation of digital technologies in the everyday lives of the people, has transformed both the ways we consume and our roles in the marketplace. The consumer has become a *homo connectus*: people are available online, living in a digital ecosystem, they are gregarious and hypersocial, use cyber language, are involved in social activism, are trapped in the net and always learning and sharing [1].

The digitalisation of consumption is one of the focus areas in digital humanities research. Digital humanities as a research approach can be described as a continuum ranging from computational-technical agendas to interpretive-humanistic research themes. This article is situated to the humanistic end of this continuum and it addresses recent developments of the digital consumption and transformations of consumer behaviour.

The purpose of this article is two-fold: the first aim is to explore the digitalisation of consumption in the recent consumer research, while the second aim emphasises reasons

for this change and possible future trends. In other words, the purpose of our article is to explore what is known and where the digitalisation of consumption is heading. In addition, we will outline challenges the digital humanities approach will face when the changes of consumption are considered.

1.2 Setting the stage: Combining consumption with the digital humanities

Examining consumption in the context of digital humanities is relevant from several perspectives. Data is being generated where ever and whenever people use or carry digital devices. The data tend to be silent or invisible: everybody participates in generating the data as they act in the consumer societies or when engaging the consumption practices. This “my data” or consumer generated data is utilised in the creation of new products and services. By consuming, the people participate in the development of the future digital products, services and practices of consumption.

There are vast commercial possibilities as innovations are based on the utilisation of data that can be combined in unlimited ways and variations. The central piece of the puzzle is massive datasets, their unique combinations and the inventive mind seeing and seeking possibilities for exploitable applications.

There is also an uncontrolled system of open and closed data generation and storing, but practices are not established for retrieving new and surprising research frames from this increasing “mass of noise”. Finding the signal from the consumption datasets is one of the relevant tasks from the digital humanities perspective. The data production is based on the available digital devices and services, but the data itself is only accessible by a few.

Digital humanities approach steps in when the inventive combinations of datasets need to be converted into usable and exploitable knowledge. This is utilised in designing new products and services that, in turn, will accumulate new data. This is, in theory, a never-ending cycle. It affects all human beings, even to those not using the digital gadgets: the data-driven process changes the practices of everyday living. Therefore, research on digital humanities combining the micro level curiosities of daily consuming (substance), computational processes (methods) and various combinations of datasets (materials) has potential not only to deepen the understanding about everyday activities, but also to create a better (or maybe worse?) tomorrow.

2 Digitalisation and consumption

Producer and production-led intensification of operations, pursuit of efficiency and process rationalisation tend to dominate the media publicity of digitalisation in Finland. Characteristics of digitalisation that shape consumption is seldom reflected upon. Consumption is an everyday activity and often a self-evident function of a household: changes in consumption tend to sneak slowly to everyday practices.

The concept of *digitalisation of consumption* emphasises how digital technologies interact with consumer society in a broad range of processes such as the consumption of digital tools and how they affect the way people consume other services or goods. In addition, the term refers to the hybridisation of the Internet and everyday life by taking into consideration both the demand and supply sides of the digital consumption [2].

Digitalisation generated changes in consumption are typically divided into waves. The central themes are connected with changes related to buying, changing consumer roles and digital virtual consumption [3]. Recently, the themes of data economy are surfaced. In this context, consumers and their behaviour are identified as the major sources for new data that generate economic value in the future.

2.1 E-commerce and digitalised buying processes

Digital devices transform the consumption practices of the people [4]. Digital goods entered the homes and everyday life of the people in the late 1970s and early 1980s. Home computers were followed by mobile phones in the early 1980s and the internet in the middle of the 1990s. Similarly, bank transactions and payment options were updated to the digital era.

However, first and probably the most apparent transformation provided by digitalisation was e-commerce solutions and the Internet shopping [3]: mail-order business was gradually replaced with web shopping. New forms of trading appeared and competed side by side with physical brick-and-mortar stores [5].

In addition, paying processes have been digitalised as mobile and contactless paying became common. Expansion of shopping and paying options realised through digitalisation increased the possibilities of consumption by removing place and time limitations. However, these transactions leave a trace, are information-rich and are stored.

The amount of obtainable goods has also multiplied. Consuming is not just easier, offerings more extensive and stripped-down from physical and time-related boundaries, but online shopping allows the new ways to daydream about consumption objects that have been unavailable before [6]. Countless purchases generate data; it is cultivated to usable knowledge and offered back to the consumers in the form of buying recommendations and other marketing activities.

2.2 Consumers' changing roles and digitalisation

Consumers' roles are fragmenting due to digitalisation [7]. A passive receiver of marketing messages and a rational chooser has transformed into a co-ordinate participant and an active actor in the marketplace.

Digitalisation of consumption allows new forms of information sharing and collaboration between consumers: service experiences are recounted in the social media and new content is created in the Internet discussion forums related to hobbies. New styles and trends are described in the web-blogs and faithful followers' tribes are extended by

creating content in video-sharing websites. All of which offer usable sources to gather data that provide another piece for a consumption profiling puzzle.

There is still another point: traditional producers' and consumers' roles are collapsing: consumers were previously reduced to be a part in the processes of economic exchange. Consumers in the digital era are increasingly seen as active co-creators, prosumers and consumer-citizens [8].

2.3 Situated between the material and virtual: digital virtual consumption

The processes of digitalisation create new products and services, whose value is based on the information they carry. Traditional consumer goods touched by the digitalisation are newspaper articles and different formats of music CDs and MP3s.

Consumer research has explored mainly *material consumption*. Another stream of research has addressed *virtual consumption* or daydreaming and fantasising. Examples of the *digital virtual consumption* - consumption that takes place in the digital and virtual worlds - can be found in the digital realms such as digital games and online communities that simulate trade and real economic transactions [9, 10]. Virtual currency of a game world is acquired with legal tender, which is then utilised in the purchasing transactions of digital virtual goods in the game worlds.

Digital virtual goods are used in communication, to differentiate socially, to show one's position and to accumulate experiences of hedonic pleasure. The goods are inseparable parts of game environments and they are utilised similarly like material products in the real world contexts. However, the digital virtual goods expose lesser environmental impacts, zero waste and they do not need to be warehoused or transported.

3 Visions: data-driven, platform-based and disruptions-generated futures

3.1 Data-driven digitalisation and consumption

The previous sections presented three transformations of consumption originating from the digitalisation. What, then, is driving these changes now and in the near future? One of the recent topics revolve around consumer data. Discussions about *data-driven economy* [11] bring consumers closer to the production processes of the digital materials. Digitalisation is connected to big and continuously expanding data sets that people from all quarters of business try to cultivate into practical and applicable information. Consumers produce valuable "my data" when they use their loyalty cards, share their web browsing histories and GPS-data from their mobile phones, for example.

The question is about gathering consumers' personal data and the rearrangement or negotiation over the ownership of these materials: who owns the data and the enriched information derived from it? In a present form of the data-driven economy, consumers

give largely away their data when they accept the terms of use of the digital products and services.

If knowledge is power, power valued and therefore a sought after resource, it has economic value and thus the market price. Is part of households' income in the future composed of selling one's consumer behaviour data and the rights of using the materials for analysis purposes? Alternatively, we might get free digital gadgets from companies in exchange of the data they collect during usage situations.

3.2 Platform-based digitalisation and consumption

Another vision is the *platform-based development* trajectory of digitalisation. This vision draws from circulation and sharing economies, which mean that owning stuff - a core premise of material consumption and market economies - is slowly losing its shine. Digital platforms administrated by companies often free of charge replace traditional marketplaces and even eat up the market share from e-commerce.

The car, ride and video sharing platforms, consumer to consumer sharing sites (e.g. platforms for sharing and selling used goods in the Internet or social media) and well-known transportation and accommodation solutions based on digital platforms [12, 13] are evident examples of fast developing "born-digital" systems that shape both consumption practices and the revenue logics of traditional companies. Essential questions are how these platforms will develop in the future and what will be the role of expanding data on this equation. Is it going to be an evolution or revolution?

3.3 Disruption-generated digitalisation and consumption

Quite certainly gradual progression will take place. However, from time to time the market has witnessed new digital innovations that shake the existing structures. Emergence of the platform business logic and the new applications approximately ten years ago (e.g. Airbnb founded in 2008, Uber founded in 2009) are examples of structure changing digital innovations.

We call these unexpected advancements as *disruption-generated development*. The term refers to new digital innovations that enter the market suddenly and rapidly. Forecasting these occurrences is basically impossible as they start from a scratch, tend to be first petite curiosities and are either totally new to the market or introducing a new way to operate in an established sector or a line of business.

Consumers' engagement is crucial, as they are the key players in the innovation adoption process. Consumers' acceptance is the litmus test of every innovation - digital or material - have to pass. New digital goods have to offer something new and exciting to consumers: better functions or usability, new experiences, identity building and differentiation elements and the always-preferred affordable price.

4 Conclusions

All of the described trends changing the practices of consumption - e-commerce or how shopping is organised, the changing roles of the consumer in the digital world or who is consuming and digital virtual consumption or what is consumed - will continue to evolve side by side with the material forms of consumption. Descriptions of these development trajectories are suggestive, but they capture some aspects of the on-going transformations.

The current trend of turning existing analogical products and services into digital versions will continue. What will happen when this transformation process is played out and all of the imaginable analogical things and processes are converted to the digital format?

The near future visions represent different perspectives to the digitalisation of consumption. Data economy is a general level concept that includes collecting and analysing a wide range of materials. Data economy touches organisations ranging from the public sector to businesses and the consumers themselves. Challenges include increasing amount of big data: how to extract useful information from the massive data sets. Refined information computed or interpreted from the data will probably be utilised in the development of new and native digital goods (i.e. goods that are not digitalised versions of existing analogical products or services). A challenge for digital humanities research is how to outline the most interesting phenomena from the endless pool of consumption activities and practices. Another challenge is how to define a combination of accessible datasets needed for solving the chosen research tasks.

Digital platforms are confined to certain and focused sectors and they are aimed to improve existing consumption processes or to solve identified practical problems. Consumers have adopted digital platforms: applications have proved to be functional. Platform-based digital consumption is mainly focused on services. Therefore, the challenge is to develop new and innovative applications. This raises questions about how the digital humanities approach suits solving practical and agile development cases, as the prompt utilisation tends to require expertise from various fields. However, research on consumption practices within a digital platform (e.g. social media platforms) have been conducted successfully.

Disruption-generated digital goods and services can be related to the completely new ways of consuming or create totally novel consumer goods. Disruption can also introduce completely new business opportunities that have not existed before. Disruption may also turn out to be unfruitful. Difficulties include forecasting the consumption potential, consumers' reactions and possible impacts on the market. A challenge for digital humanities lies in predictive or proactive modelling. The digital humanities approach is usable when a known consumption phenomenon is under investigation, when large existing datasets apply and when the goal is to classify or group the data. However, less is known about the benefits of this approach when disruptions or single and sudden occurrences in economy are examined.

From critical perspective, the digitalisation of consumption has some caveats that need to be addressed particularly when the digital humanities approach is adopted. The risks include questions such as the ownership of the data and protection of personal

information, the negative consequences of the emerging and developing e-market and e-consumptions patterns among the consumers. There are challenges with digital products and economy: the move from consumers to prosumers and how big data and digital platforms, and therefore the multinational companies, benefit on all the shared and consumer-generated content. These issues are not yet properly addressed in the current research literatures.

In any case, digital data, platforms and disruptions have the potential to transform consumption and consumer behaviour. Consumers participate actively in the generation of digital data. In the future, consumers probably own it, use it as a resource pool to know themselves better, improve their lives and exchange these materials with the developers. All of the mentioned changes are driven by data in its various forms. The key challenges for digital humanities approach will be 1) a clear outline of a substance-based phenomenon examined in the context of consumption, 2) a definition of the suitable and multiple datasets that provide the evidence needed, and 3) a determination of a proper combination of qualitative-computational methods that work seamlessly together. Therefore, a fruitful mixture of expertise is needed: focusing on emerging consumption patterns, suitable and above all available datasets to trace the progress and technical-methodical knowing on how to bring the other two together. The classical Aristotelian premise might just hold true in the case of digital humanities approach: “The whole is greater than the sum of its parts”.

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